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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,323	07/17/2003	Sze Tan	6033-019	4328

7590 09/22/2005

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OIP/IA/P

OCT 20 2005

EXAMINER

ROSENBERGER, RICHARD A

ART UNIT PAPER NUMBER

2877

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/622,323

Applicant(s)

TAN ET AL.

Examiner

Richard A. Rosenberger

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 29-46, 48 and 49 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 47 is/are rejected.
- 7) ☒ Claim(s) 5-28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orr et al (US 2003/0189711).

As in claims 1 and 4, and 47, Orr et al teaches, one page 10, column 1, lines 1-9, a technique that included smoothing the oscillatory part of the ringdown decay with a low-pass filter, noting that such smoothing can contribute rapidly and accurately deriving the ringdown time. Orr does not teach the claimed bandwidth characteristic of the low-pass filter used to smooth the signal; leaving the selection of the particular filter with particular filter characteristics suitable for the smoothing to the ordinary skill of those in the art. The instant specification, in the paragraph bridging page 6, presents the choice of filter characteristics as the kind of engineering tradeoff commonly made in all the engineering arts, balancing the undesired effects of having a bandwidth that is too high against the undesired effects of having it too low. Thus it appears from the instant specification that the claimed bandwidth, although characterized in a manner not used in the cited art, nevertheless is within the range of filters which those, in choosing a filter for the system of Orr et al, using ordinary skill and ordinary engineering design practice, would choose.

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Orr et la noted (page 6, column 2, in paragraph [0104], that it is known to use an A/D converter to convert a detected signal into a corm suitable for analysis. While the reference does not specifically teach that the A/D converter is operated to sample the signal uniformly over time, this is the most usual and standard manner of operating an A/D converter and is such a well-known manner of operating an A/D converter that official notice is sufficient.

Orr et al notes that the system can use “computer fitting” (page 10, column 2, line 9), which at least clearly suggests :suing a curve fitting method” as claimed.

As in claims 2 and 3, both analog and digital filters, and their use to filter signals, is so well known official notice is sufficient.

3. The art of record does not teach or suggest the claimed estimating the ringdown time by averaging the time separation of data points which differ in value by a predetermined ratio; thus claim 5 and the claims dependent therefrom (6-8, and 15-28), and claim 10, and claims dependent therefrom (11-12) contain allowable subject matter, as do claims 29 and 39, and claims 30-38 and 40-46 as dependent therefrom, and claims 48 and 48.

The art does not teach or suggest searching for a trigger data points in the manner of claim 9 and claims dependent therefrom (claims 10-14), which therefor contain allowable subject matter.

Thus Claims 29-46 and 48-49 are allowable and claims 5-28 would be allowable if rewritten in independent form including all of the limitations of their respective parent claims.

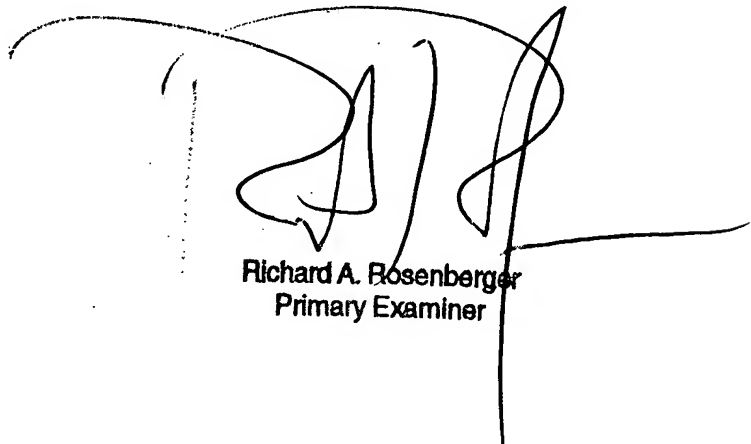
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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger  
19 September 2005



Richard A. Rosenberger  
Primary Examiner

<b>Notice of References Cited</b>	Application/Control No. 10/622,323	Applicant(s)/Patent Under Reexamination TAN ET AL.	
	Examiner Richard A. Rosenberger	Art Unit 2877	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-2003/0189711	10-2003	Orr et al.	356/484
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

TC2800

Jeff

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